

## Toyota Foundation Grant Evaluation Plan

Educational Outcome	Tasks	Measurement
Develop a model for creating a partnership to focus on pre-service education	<p>Develop observation protocol and procedures for tracking decision-making process.</p> <p>Make observations and record decisions made at the partnership meetings.</p>	Document the formation and continuation of the partnership between constituents.
Design a pre-service teacher graduate course module on geology	<p>Evaluating content of curriculum using a specific set of criteria such as:</p> <ul style="list-style-type: none"> <li>-Identify explicitly stated goals for curriculum</li> <li>-Alignment of goals with best practice in scientific community on topic of geology</li> <li>-Identify key teaching strategies to teach geology with an inquiry focus.</li> <li>-Examine transitions within and between topics in the curriculum</li> <li>-Examine assessment strategies</li> <li>-Identify connections to home communities</li> </ul>	Evaluate each component of the geology curriculum based on the criteria and make suggestions for revision to curriculum developers.
Design an interactive program to teach pre-service teachers the geology curriculum.	Develop interactive program for pre-service teachers to learn content and teaching strategies for teaching the geology curriculum.	<p>Assess alignment of geology curriculum with the pre-service program.</p> <p>Evaluate the interactive program</p> <ul style="list-style-type: none"> <li>-Document the content to be covered in training</li> <li>-Document the teaching strategies to be presented</li> </ul>
Enhance teachers' <i>knowledge of geology</i> content related to the natural setting provided by GGNRA	<p>Create instruments to assess geology content</p> <p>Pilot instruments &amp; revise assessments</p> <p>Administer tests</p> <p>Analyze data / Write report</p>	Pre and post assessments to determine change in pre-service teachers' knowledge of geology.

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Educational Outcome	Tasks	Measurement
<p>Improve participating teachers' <i>science teaching skills</i> in alignment with the National Science Education Teaching Standards and the Interstate New Teachers Assessment and Support Consortium's Standards</p>	<p>Develop criteria for evaluating alignment between curriculum and standards</p> <p>Create survey instruments to assess geology teaching strategies</p> <p>Pilot survey instruments &amp; revise</p> <p>Administer surveys</p> <p>Analyze data / Write report</p>	<p>Evaluating curriculum for explicit connections between content and National Science standards and teaching standards</p> <p>Evaluating participants' ability to make connections between lessons and teaching standards</p> <p>Pre and post surveys on elements of lessons that connect to the National science standards and the teaching standards.</p> <p>Classroom observations of sub sample of pre-service teachers to document types of teaching strategies used in classrooms (depends on funding)</p>
<p>Develop teachers' <i>awareness of informal science education resources</i>, particularly at National Parks, available to supplement and enhance science instruction</p> <p>Develop teachers' <i>ability to use National Parks as labs</i> for innovative, relevant place-based science instruction, including collaborating with informal educators (park staff, park partners, and others).</p>	<p>Create survey instruments to assess NPS informal science resources</p> <p>Pilot survey instruments &amp; revise</p> <p>Administer surveys</p> <p>Analyze data / Write report</p>	<p>Assess participants' ability to identify informal science resources and how they might incorporate them into their teaching.</p> <p>Interviews with sub samples of pre-service teachers about how they might use NP as a part of their curriculum in the future. (depends on funding)</p>